

REMARKS

Claims 13-20 stand rejected under 35 USC § 112, second paragraph. The Examiner states that the phrase "wherein the compound is in free form or salt form and the tautomers thereof each in free form or salt form" renders the claims indefinite. Applicant has amended claims 13 and 18-20 to remove this phrase and overcome this rejection. Withdrawal of the same is respectfully requested.

Claims 13-16 and 18-19 stand rejected under 35 USC § 102(b) as being anticipated by Kristinsson (U.S. 4,931,439). The Examiner refers to the example P.5 of US 4,931,439. In the said example the hydrochloride of pymetrozine was made. The hydrochloride salt was not obtained in the hydrated form, which can be shown in the following way: In example P.5, 0.1 mole of pymetrozine was used. A 100% yield of pymetrozine-hydrochloride having a formula weight of 254 would be 25.4 grams. The obtained yield was 19 grams or 75% of the theoretical amount, as indicated in the example. Said obtained amount corresponds to the waterfree compound. The hydrochloride in the di-hydrated form would have a molecular weight of 290; 19 grams obtained would correspond to a yield of only 65%, which is not in accordance with the 75% given in the example.

And even if pymetrozine in the example P.5 of the reference would have been obtained as a di-hydrate, for instance in an intermediate stage, it would still have been be the *hydrochloride*, which is not presently claimed, and it would still not have been in the public domain at the time of the filing of the present application.

What has been said above should also to be seen in the light of example P.3 of US4,931,439, where again the un-hydrated pymetrozine was obviously isolated: The yield of 48g corresponds to 90% of the un-solvated compound. The waterfree compound was obtained despite the reaction was carried out in an open vessel and in the presence of what appears to be ethanol 96%, containing 4% of water. There is neither an indication that waterfree ethanol was used nor is there any hint that the product had taken up water upon standing.

Since example P.5 of US 4,931,439 clearly discloses the un-hydrated hydrochloride salt of pymetrozine, that artisan would not conclude that the free compound would form such a hydrate.

The teaching of the '439 patent that water may be used in formulations does not affect the novelty of the present subject, since no formulation actually containing water is disclosed in the reference. The '439 reference does not disclose a pesticidal formulation containing pymetrozine di-hydrate together with adjuvants.

Applicant believes that the Examiner's interpretation of *In re Petering*, 133 USPQ 275, and *In re Schaumann*, 195 USPQ 5, is incorrect. Anticipation is a selection of a single species out of a very small genus of the state of the art. In the Schaumann decision, the state of the art consisted of seven members (a substituent C₁-C₄alkyl, of which methyl was specifically disclosed). The selection out of those seven members was ethyl. However, the artisan would *immediately envisage all seven members of the genus* of the state of the art, hence ethyl was not considered novel.

The situation in the present case is entirely different. The fact that pymetrozine can form stable solvates such as hydrates is not hinted at in the state of the art. The state of the art provides neither any information that such solvates are stable at all, nor would the artisan conclude that the di-hydrate is an especially stable form. Had the applicant found, that the ethanol or the ether adducts are particularly useful, the Examiner would certainly have used exactly the same argumentation by just pointing at example P.3 of the '439 patent instead of example P.5. Therefore, the argumentation is based on hindsight, the objection could only be raised with the knowledge of the present invention.

In Ex. P.5, the hydrochloride is prepared. Since Applicant no longer claims salts, Ex. P.3 is the better example. Applicant's comments on Ex. P.3/P.5 of Kristinsson is as follows:

0,25 moles of each of the educts were used. A 100% yield of pymetrozine would give 0,25 moles or 54,25 g of the compound having a molecular weight of 217. The actually obtained yield of the obviously waterfree compound was 48 g, which is 90% of the theoretically possible amount, in correspondence with the figures given in the example. In the case of a di-adduct of water, a compound having a molecular weight of 253 would have been isolated. 48 g of the said adduct would correspond to a yield of 75.9%, which does not fit with the 90% given in the example. Therefore, the assumption that a hydrate had been isolated has no basis in the referential art. The only possible conclusion from the said example P.3 is, that the unsolvated compound was obtained. Virtually the same consideration holds in the case the assumption is made, that the ethanol-adduct was isolated in P.3, and the 19g (75%) yield of the hydrochloride of Ex. P.5 also clearly indicates that the waterfree compound was obtained.

In view of the disclosure of the '439 patent, the artisan would not expect that in Ex. P.11 of the '403 patent the dihydrate had been obtained. A further piece of evidence are also the X-ray data disclosed in the present specification, see tables 3 and 4. They clearly demonstrate the the dihydrate species is different from the alpha-modification known from the state of the art.

Even if the products obtained by Kristinsson and Rapold were isolated as di-hydrates and then dried afterwards, they were anyway not in the public domain as di-hydrates, they were rather used in the un-hydrated form for producing the pesticidally active compositions, and only then distributed to the customers. Pymetrozine in the essentially pure form is not available on the market.

Enclosed herewith is a Declaration under 37 C.F.R. §1.132 in support of the above arguments. The compound of Example 11 from U.S. 5,384,403 was prepared. The results show that it could not have been expected from the teachings of U.S. 5,384,403 that the compound of the present invention containing two molecules of water would have been prepared according to the teachings of the cited reference.

Claims 17 and 20 stand rejected under 35 USC § 103(a) based on the teachings of Kristinsson. Applicant believes that it is in view of the state of the art, entirely unforeseeable which solvent or hydrate of the active ingredient would be formed, and which property of the composition will be improved by using the hydrated form instead of the waterfree active ingredient. Again, the Examiner's comments seem to indicate that he has failed to see and take notice of the advantages described on pages 8 to 10 of the specification.

Please take note of the following from page 8 continuing onto page 9:

When formulating pymetrozine, this characteristic known as spontaneity is not obtained if a formulation is used which is originally water-free or of low water content, but has absorbed water again during storage. In contrast to the essentially water-free formulations, after storing for a period of 7 days in the appropriate test apparatus, the formulations according to the invention show a complete breakdown of the granulates into the primary particles within a few minutes.

The fact that the presently claimed formulations have this said advantage can in no way be derived from Kristinsson, or be obvious in view of the disclosure of Kristinsson. The teaching of Kristinsson says neither anything about hydrates of pymetrozine nor does it say anything about formulations containing hydrates, let alone anything about advantages of such formulations, or methods of preparation.

Applicant submits that in view of the amendments to the claims and the evidence submitted in the form of the attached Declaration, claims 13-20 are now in condition for allowance. Withdrawal of the rejections and issuance of a Notice of Allowance is respectfully requested.

Respectfully submitted,

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